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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/791,383	03/03/2004	Atsuhiro Takata	Q80143	3486

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EXAMINER

HEALD, ROBYN SUE

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 01/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/791,383	Applicant(s) TAKATA ET AL.	
	Examiner Robyn S. Heald	Art Unit 1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 March 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
 4a) Of the above claim(s) 3 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>03/03/04, 07/19/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-2, drawn to a method for producing a laminated porous polyolefin film, classified in class 156, subclass 308.2.
 - II. Claim 3, drawn to a laminated porous polyolefin film, classified in class 428, subclass 304.4.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the laminated porous polyolefin film could be produced by drawing the two films of the laminate to render them porous and then laminating the two films together.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
4. During a telephone conversation with Mr. John Callahan on December 27, 2005 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-2. Affirmation of this election must be made by applicant in replying to this

Art Unit: 1733

Office action. Claim 3 has been withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-2 are rejected under 35 U.S.C. 103(a) as being obvious over McAmish et al. (U.S. Patent 6,811,643) in view of Hutson et al. (U.S. Patent Application Publication 2003/0105446).

With respect to claim 1, McAmish et al. discloses a method for producing a laminated porous film 12, comprising providing a pair of tools 24 and 25 for bonding two resin films 26 and 33 therebetween (figure 1 and column 7, lines 1-24), laminating two films 26 and 33 each comprising at least one layer made of a polyolefin composition comprising 38-55% by weight of a polyolefin resin and 40-60% by weight of filler

Art Unit: 1733

(column 10, lines 25-46) by piling and bonding the films 26 and 33 between the tools 24 and 25 (figure 1 and column 7, lines 1-24), and drawing the laminated film 12 to form micropores therein, thereby yielding a porous film 12 (figure 1, column 3, lines 1-10, and column 7, lines 29-31).

McAmish et al. discloses a large range of resin and filler to be used in the films 26 and 33, and the examiner would appreciate that these percent by weight ranges to be broad enough that they would translate into the parts by weight ranges that would satisfy those claimed by the applicants, but a melt index of the resin is not mentioned. One skilled in the art would understand that the melt index would depend on the resin developed for the product, and therefore it would have been within perview of the skilled artisan to develop this resin with a polyolefin having a melt index of 0.1 g/10 min or less to have superior mechanical strength in the product.

In reference to the thermocompression bonding, McAmish et al. is not particular to the rolls 24 and 25 that are used as the bonding tools and does not mention whether their surfaces are heated for thermocompression bonding.

It is commonly known in the art of lamination to use rollers having heated surfaces for thermocompression bonding of an extruded film layer and a preformed film layer, as taught by Hutson et al. Hutson et al. discloses a method for producing a porous laminate 10 by bonding an extruded film layer 14 and a preformed film layer 12 using heated rollers 38 (figure 3, paragraph 0026, paragraph 0054). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to use heated rollers 24 and 25 for thermocompression bonding, to elevate the bonding

Art Unit: 1733

temperature, after having cooled extruded film 26 to prevent draw resonance, for an easier, more uniform bond between the two films 26 and 33. It would also have been within perview of the skilled artisan to use a temperature higher than the melting point of the polyolefin used by 5 to 25 °F, depending on the characteristics of the particular materials used for the films 26 and 33, to increase the ease of bonding.

Regarding claim 2, McAmish et al. discloses a resin containing greater than 10% by weight of polyolefin resin, but is silent to the molecular chain length desired for the resin. The molecular chain length of the polyolefin resin used will depend on the particular properties of the materials used for the resin. Therefore, it would have been within perview of the skilled artisan to develop a polyolefin resin having a molecular chain length of 2850 nm or more to create a film that will maintain its strength and porosity during stretching.

8. Claims 1-2 are rejected under 35 U.S.C. 103(a) as being obvious over McAmish et al. and Hutson et al. and in further view of Takata et al. (U.S. Patent 6,884,836).

The applied reference to Takata et al. has a common assignee and inventors with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of

Art Unit: 1733

the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(l)(1) and § 706.02(l)(2).

With respect to claim 1, if it is not taken that the percent by weight ranges given by McAmish et al. translate into the parts by weight ranges claimed by the applicants, one skilled in the art would understand that with the materials used and the broad percent by weight ranges given for the films 26 and 33 of McAmish et al., one could develop a mixture that is 100 parts by weight of polyolefin resin, having a melt index of 0.1 g/10 min or less, and 80 to 300 parts by weight of filler.

A similar composition range is used by Takata et al. to produce a polyolefin based resin film that may be used for similar purposes of stretching disclosed by McAmish et al. Takata et al. discloses a film having 100 parts by weight of polyolefin resin component and 10 to 300 parts by weight of filler (column 1, lines 42-49).

Therefore, it would have been within pervue of the skilled artisan to develop a resin film having 100 parts by weight of polyolefin resin and 80 to 300 parts by weight of filler, so that he can produce a resin film with the porosity and strength characteristics desired for the product. It would also have been within pervue of the skilled artisan to develop this

Art Unit: 1733

resin with a polyolefin having a melt index of 0.1 g/10 min or less to have superior mechanical strength in the product.

Regarding claim 2, McAmish et al. discloses a resin containing greater than 10% by weight of polyolefin resin, but is silent to the molecular chain length desired for the resin. It would have been within pervue of the skilled artisan to develop a polyolefin resin having a molecular chain length of 2850 nm or more, like that taught by Takata et al. (column 1, lines 43-44), depending on the polymers used for the film and the properties desired, to create a film that will maintain its strength and porosity during stretching.

9. Claims 1-2 are rejected under 35 U.S.C. 103(a) as being unpatentable over McAmish et al. and Hutson et al. and in further view of Sugimoto et al. (U.S. Patent 4,472,328).

With respect to claim 1, if it is not taken that the percent by weight ranges given by McAmish et al. translate into the parts by weight ranges claimed by the applicants, one skilled in the art would understand that with the materials used and the broad percent by weight ranges given for the films 26 and 33 of McAmish et al., one could develop a mixture that is 100 parts by weight of polyolefin resin, having a melt index of 0.1 g/10 min or less, and 80 to 300 parts by weight of filler.

A similar composition range is used by Sugimoto et al. to produce a porous polyolefin film or sheet that may be used for similar purposes of stretching disclosed by McAmish et al. Sugimoto et al. discloses a film having 100 parts by weight of polyolefin resin, having a melt index of 0.1 to 5 g/10 min (column 2, lines 10-15), and 25 to 400

Art Unit: 1733

parts by weight of filler (column 1, lines 50-57). Therefore, it would have been within pervuew of the skilled artisan to develop a resin film having 100 parts by weight of polyolefin resin, having a melt index of 0.1 g/10 min, and 80 to 300 parts by weight of filler, so that he can produce a resin film with the superior porosity and strength characteristics desired for the product.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Robyn S. Heald** whose telephone number is **571-272-2362**. The examiner can normally be reached on Mon-Thur, 8:00-5:30; every second Fri, 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rick Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Robyn Heald

Jessica L. Rossi

Application/Control Number: 10/791,383

Page 9

Art Unit: 1733

Examiner
Art Unit 1733

Primary Examiner
Art Unit 1733

JÈSSICA ROSSI
PRIMARY EXAMINER

A handwritten signature in cursive script, appearing to read "Jessica Rossi", written in black ink.